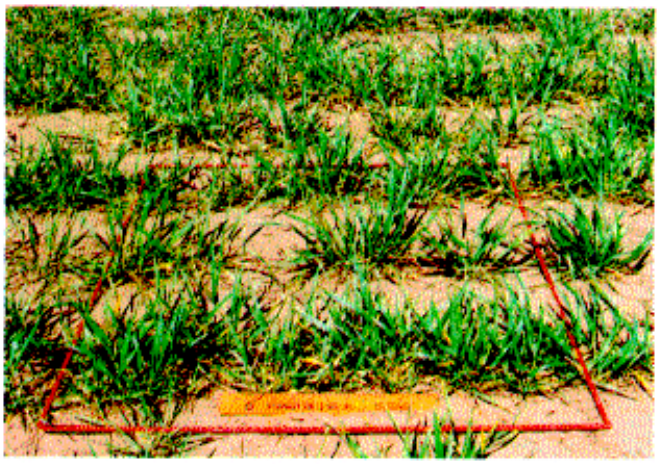
GROWING SMALL GRAIN RESIDUE



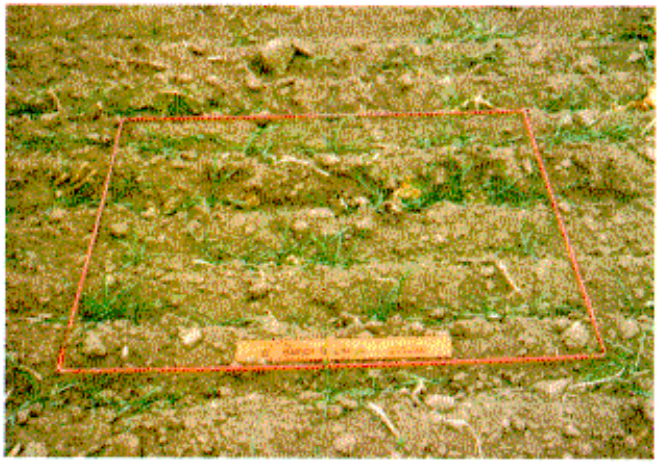
800 lbs/A 1,600 lbs SGe

650 lbs/A 1,300 lbs SGe

500 lbs/A 850 lbs SGe

250 lbs/A 500 lbs SGe

175 lbs/A 375 lbs SGe



65 lbs/A 175 lbs SGe

Estimating Amounts of Growing Small Grains

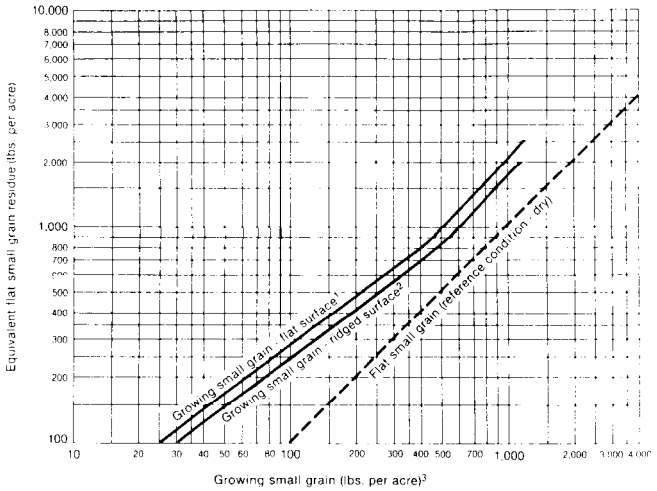
Maintaining crop residue and/or growing crops is an integral component of practices to control soil erosion and will be part of most conservation plans written for the conservation compliance provision of the 1985 Farm Bill.

The amount of growing small grains can be reported in two ways: pounds per acre (lbs/A) and small grain equivalent (SGe).

Pounds per acre: the weight of clean, dry material expressed on a per acre basis; can be used where water and/or wind erosion is the primary concern.

Small grain equivalent (SGe): relates the type, amount, and orientation of residue to its equivalent in pounds per acre of small grain residue or growing crop in a reference condition. (Reference condition is defined as 10-inch-long stalks of small grain parallel to the wind direction lying flat in rows spaced 10 inches apart). Small grain equivalent is commonly used where wind erosion is the primary erosion concern and is evaluated during the critical wind erosion period, usually November through April. The SGe of various residues or crops can be determined by using SGe charts (see Fig. 1 for growing small grains). To use the chart, find lbs/A of growing small grains on the x-axis, locate the plot of interest, and read the SGe from the y-axis. Example: 500 lbs/A of flat growing small grains (flat surface) is equivalent to 1,000 lbs/A of SGe.

Figure 1: Small grain equivalents of growing small grains.



Methods for estimating residue

Estimating residue can be useful in planning field operations to control soil erosion or to determine whether adequate residue remains to qualify for conservation compliance programs. Two methods to estimate residue are described.

Photo-comparison method: Comparing residue in the field to photographs of known amounts can be used to estimate residue expressed as percent cover, lbs/A, or SGe (see over). Visual estimates must be made looking straight down at the soil surface for flat residue and at an angle for standing residue. Scanning the residue from the road is not adequate and will overestimate residue amounts.

Cut and weigh method: This procedure involves 1) clipping the growing small grain at the soil surface from a known area, 2) washing, drying, and weighing the residue, and 3) expessing the amount of residue on a per acre basis. Care must be taken to carefully remove all soil and foreign material from the growing small grain sample. In some situations, dry washing or vigorously shaking the sample to remove all foreign material can replace washing with water. However, even with dry washing, the sample must still be dried to determine dry matter content.

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